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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/919,814	08/02/2001	Yukihiko Ichikawa	018775-836	4284

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EXAMINER

MILIA, MARK R

ART UNIT	PAPER NUMBER
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2625

DATE MAILED: 08/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/919,814

Applicant(s)

ICHIKAWA ET AL.

Examiner

Mark R. Milia

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2006.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-27 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's amendment was received on 6/8/06 and has been entered and made of record. Currently, claims 1-27 are pending.

Response to Arguments

2. Applicant's arguments filed 6/8/06 have been fully considered but they are not persuasive.

The applicant asserts that neither Miyaza nor Tanioka disclose matching the size of the characters with the size of the character image. The examiner respectfully disagrees as the combination of Miyaza and Tanioka do disclose such a feature. Particularly, Miyaza discloses in column 65 lines 53-58 and column 66 lines 8-29 that character size and position are detected and redetected to ensure that the transformed/magnified character data coincide with the original detected character position. Tanioka further discloses that character size and position is detected and stored, the stored information later utilized to ensure that after magnification that character position corresponds to the original character positions and layout. Therefore, Miyaza and Tanioka disclose matching the size of the characters with the size of the character image. Regarding claims 16-18, the applicant also asserts that Tanioka fails

to disclose, "comparing the calculated width to the actual width". The examiner respectfully disagrees as Tanioka does disclose such a feature. Particularly, Tanioka discloses that an actual width of a line of characters is measured by dividing the total number of pixels by the number of detected characters (paragraph 27) and calculates the width of a line of characters based on the font point size by multiplying the font point size detected by the number of dots associated with that point size (paragraph 28) and further discloses comparing the calculated width to the actual width by subtracting the two obtained values as acquired above (paragraph 28). The above information is utilized to correctly magnify characters by a desired amount thereby correcting the font point size according to the ratio of the calculated width to the actual width.

Therefore, the rejection of claims 1-21, as cited in the previous Office Action, is maintained and repeated in this Office Action. Newly added claims 22-27 will be addressed in the following rejection.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1-3, 5-8, and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyaza (US 5825942) in view of Tanioka (USPN 2004/0114804).

Regarding claim 1, Miyaza discloses an image processor comprising a code recognizer which recognizes character code from a character image included in image

data to be processed (see column 10 lines 42-48, column 11 lines 10-20, column 12 lines 46-53, and column 13 lines 21-35), a size recognizer which recognizes character sizes of the character image (see column 10 lines 3-7 and column 12 lines 13-20 and 51-54), a setter which sets a magnification (see column 8 lines 59-65, column 9 lines 5-8, and column 12 lines 39-45), a magnification changer which enlarges or reduces the image data according to the magnification set said setter (see column 10 lines 42-48, column 11 lines 5-9, column 21 lines 16-31, and column 43 lines 7-27), a memory section which stores a plurality of font data of different sizes (see column 13 lines 38-51 and column 67 lines 63-65), a selector which selects a font data of a particular size from among the plurality of data stored in said memory section, based on the character code recognized by said code recognizer, the font size recognized by said size recognizer and the magnification set by said setter, to match with a region of the character image in the image data (see column 13 lines 38-51, column 59 lines 40-44, column 60 lines 16-19 and 27-32, column 62 lines 10-12, column 65 lines 53-58, column 66 lines 8-29, column 67 lines 63-65, column 67 lines 36-46, and column 67 line 59-column 68 line 18), and an output section which outputs the font data selected said selector (see Fig. 3, column 8 lines 46-57, column 64 lines 1-4, and column 68 lines 4-11 and 40-42).

Miyaza does not disclose expressly wherein the character size refers to the point size of the character.

Tanioka discloses detecting point sizes of characters read in from an image reader, determining font size and type and storing information in memory for later

retrieval used in character magnification (see Figs. 2 and 3, paragraph [0024] lines 6-12, and paragraphs [0025], [0028], [0029], and [0032]-[0034]).

Regarding claims 7 and 8, Miyaza discloses an image processing method and computer readable medium storing a program comprising the steps of recognizing character code from a character image included in an image data to be processed (see column 10 lines 42-48, column 11 lines 10-20, column 12 lines 46-53, and column 13 lines 21-35), recognizing character size of the character image (see column 10 lines 3-7 and column 12 lines 13-20 and 51-54), setting a magnification (see column 8 lines 59-65, column 9 lines 5-8, column 10 lines 42-48, column 11 lines 5-9, column 12 lines 39-45, column 21 lines 16-31, and column 43 lines 7-27), selecting font data of a particular size from among a plurality of font data of different sizes, based on the recognized character code, the recognized font sizes and the set magnification to match with a region of the character image in the image data (see column 13 lines 38-51, column 59 lines 40-44, column 60 lines 16-19 and 27-32, column 62 lines 10-12, column 65 lines 53-58, column 66 lines 8-29, column 67 lines 63-65, column 67 lines 36-46, and column 67 line 59-column 68 line 18), and outputting the selected font data (see Fig. 3, column 8 lines 46-57, column 64 lines 1-4, and column 68 lines 4-11 and 40-42).

Miyaza does not disclose expressly wherein the character size refers to the point size of the character.

Tanioka discloses detecting point sizes of characters read in from an image reader, determining font size and type and storing information in memory for later

retrieval used in character magnification (see Figs. 2 and 3, paragraph [0024] lines 6-12, and paragraphs [0025], [0028], [0029], and [0032]-[0034]).

Miyaza & Tanioka are combinable because they are from the same field of endeavor, manipulation (magnification or reduction) of character size for image reproduction.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the detection and utilization of point sizes of characters to accurately reproduce an image that has been manipulated (magnified or reduced), as described by Tanioka, with the system of Miyaza.

The suggestion/motivation for doing so would have been to accurately reproduce characters included in an image at variable powers (scaling up or down in accordance with a size of copy paper) (see paragraphs [0004]-[0008] of Tanioka).

Therefore, it would have been obvious to combine Tanioka with Miyaza to obtain the invention as specified in claims 1, 7, and 8.

Regarding claim 2, Miyaza and Tanioka disclose the system discussed in claim 1, and Miyaza further discloses a reading section which reads a document image to provide the image data to be processed (see column 7 lines 49-50).

Regarding claim 3, Miyaza and Tanioka disclose the system discussed in claim 1, and Miyaza further discloses an image-forming section which forms an image on a recording medium based on the font data outputted by said output section (see Fig. 3, column 8 lines 46-57, and column 64 lines 1-4).

Regarding claim 5, Miyaza and Tanioka disclose the system discussed in claim 1, and Miyaza further discloses a size changer which changes the font size selected by said selector, based on the character size recognized by said size recognizer and the magnification set by said setter (see column 67 lines 36-46 and column 65 lines 14-62).

Regarding claim 6, Miyaza and Tanioka disclose the system discussed in claim 1, and Miyaza further discloses wherein said magnification changer enlarges or reduces the character image based on the magnification set by said setter when font data in correspondence to the character code recognized by said code recognizer is not stored in said memory section (see column 21 lines 16-31 and column 43 lines 7-27).

Regarding claims 16-18, Miyaza and Tanioka disclose the system discussed in claims 1, 7, and 8, and Tanioka further discloses wherein the recognizing of point size of the characters in the character image is done by recognizing a font point size of the characters in a line in the character image, calculating the width of the line of characters based on the width of recognized font point size, measuring the actual width of the line of characters, comparing the calculated width to the actual width, and correcting the recognized point size according to the ratio of the calculated width to the actual width (see paragraphs [0026]-[0034]).

Regarding claims 22-24, Miyaza and Tanioka disclose the system discussed in claims 1, 7, and 8, and Miyaza further discloses wherein the selector further selects the font data based on a size of the region of the character image in the image data (see column 65 lines 53-58, column 66 lines 8-29).

5. Claims 9-15 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ando in view of Miyaza and Tanioka.

Regarding claim 9, Ando discloses an instruction section which instructs to output image data of N pages to be processed in M sheets of recording medium, wherein N and M are natural numbers and N is not equal to M (see Figs. 6B, 6D, and 7A, column 5 lines 12-14, column 6 lines 52-58, column 6 line 66-column 7 line 37, column 8 lines 48-52, and column 12 lines 15-46), a synthesizer which generates output image data by laying out the font data selected by said selector in the M sheets (see column 4 lines 40-42, column 5 lines 12-14, and column 12 lines 15-46), and an output section which outputs the output image data generated by said synthesizer (see column 3 lines 47-55).

Ando does not disclose expressly a code recognizer which recognizes character code from a character image included in the image data of N pages and recognizes a point size of the character code, a memory section which stores a plurality of font data, and a selector which selects font data of a particular size from among the plurality of font data stored in said memory section, based on the character code recognized by said code recognizer, the font point data recognized by said code recognizer and the magnification set by said setter, to match with a region of the character image in the image data.

Miyaza discloses a code recognizer which recognizes character code from a character image included in the image data of N pages (see column 10 lines 42-48, column 11 lines 10-20, column 12 lines 46-53, and column 13 lines 21-35), a memory

section which stores a plurality of font data (see column 13 lines 38-51 and column 67 lines 63-65), and a selector which selects font data of a particular size from among the plurality of font data stored in said memory section, based on the character code recognized by said code recognizer, the font data recognized by said size recognizer and the magnification set by said setter, to match with a region of the character image in the image data (see column 13 lines 38-51, column 59 lines 40-44, column 60 lines 16-19 and 27-32, column 62 lines 10-12, column 65 lines 53-58, column 66 lines 8-29, column 67 lines 63-65, column 67 lines 36-46, and column 67 line 59-column 68 line 18).

Miyaza does not disclose expressly wherein the character size refers to the point size of the character.

Tanioka discloses detecting point sizes of characters read in from an image reader, determining font size and type and storing information in memory for later retrieval used in character magnification (see Figs. 2 and 3, paragraph [0024] lines 6-12, and paragraphs [0025], [0028], [0029], and [0032]-[0034]).

Regarding claims 14 and 15, Ando discloses instructing to output image data of N pages to be processed in M sheets of recording medium, wherein N and M are natural numbers and N is not equal to M (see Figs. 6B, 6D, and 7A, column 5 lines 12-14, column 6 lines 52-58, column 6 line 66-column 7 line 37, column 8 lines 48-52, and column 12 lines 15-46), generating an output image data in a layout of M sheets by using the selected font data (see column 3 lines 47-55, column 4 lines 40-42, column 5

lines 12-14, column 6 line 66-column 7 line 37, and column 12 lines 15-46), and outputting the generated output image data (see column 3 lines 47-55).

Ando does not disclose expressly recognizing character code from a character image included in the image data of N pages and recognizing a point size of the recognized character code and selecting font data of a particular size from among a plurality of font data, based on the recognized character code and the point size of the recognized character code to match with a region of the character image in the image data.

Miyaza discloses recognizing character code from a character image included in the image data of N pages (see column 10 lines 42-48, column 11 lines 10-20, column 12 lines 46-53, and column 13 lines 21-35) and selecting font data of a particular size from among a plurality of font data, based on the recognized character code to match with a region of the character image in the image data (see column 13 lines 38-51, column 65 lines 53-58, column 66 lines 8-29, column 67 lines 36-46, and column 67 line 59-column 68 line 18).

Miyaza does not disclose expressly wherein the character size refers to the point size of the character.

Tanioka discloses detecting point sizes of characters read in from an image reader, determining font size and type and storing information in memory for later retrieval used in character magnification (see Figs. 2 and 3, paragraph [0024] lines 6-12, and paragraphs [0025], [0028], [0029], and [0032]-[0034]).

Ando, Miyaza, & Tanioka are combinable because they are from the same field of endeavor, manipulation of documents using an image forming apparatus.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the detection and utilization of point sizes of characters to accurately reproduce an image that has been manipulated (magnified or reduced), as described by Tanioka, and the character recognizer, magnifier, and correction system of Miyaza, with the system of Ando.

The suggestion/motivation for doing so would have been to accurately reproduce characters included in an image at variable powers (scaling up or down in accordance with a size of copy paper) (see paragraphs [0004]-[0008] of Tanioka) and to provide a system in which only those documents which are in a readable condition will be printed (see column 13 lines 9-15 of Miyaza).

Therefore, it would have been obvious to combine Miyaza and Tanioka with Ando to obtain the invention as specified in claims 9 and 14-15.

Regarding claim 10, Ando, Miyaza, and Tanioka disclose the system discussed in claim 9, and Miyaza further discloses wherein said memory section stores the plurality of font data of different sizes, further comprising a font size calculator which calculates a size of the font data to be selected by said selector so that the font data selected by said selector are included in a predetermined are in the M sheets (see column 65 lines 14-62 and column 67 lines 36-46).

Regarding claim 11, Ando, Miyaza, and Tanioka disclose the system discussed in claim 9, and Ando further discloses a region size calculator which calculates a size of an output character region in the M sheets according to the character region (see column 6 line 66-column 7 line 37 and column 8 line 17-column 10 line 14) and Miyaza further discloses a discriminator which discriminates a character region in the image data to be processed (see column 12 lines 47-54) and a font size calculator which calculates a size of the font data to be selected by said selector so that the font data selected by said selector are included in the output character region in the M sheets (see column 65 lines 14-62 and column 67 lines 36-46).

Regarding claim 12, Ando, Miyaza, and Tanioka disclose the system discussed in claim 9, and Ando further discloses wherein N is larger than M (see column 5 lines 12-14, column 8 lines 48-52, and column 12 lines 15-46).

Regarding claim 13, Ando, Miyaza, and Tanioka disclose the system discussed in claim 12, and Ando further discloses wherein N is an odd number (see column 6 lines 52-58, reference teaches that N can be any number of pages therefore N can be an odd number and is analogous to the claim).

Regarding claims 19-21, Ando, Miyaza, and Tanioka disclose the system discussed in claims 9, 14, and 15, and Tanioka further discloses wherein the recognizing of point size of the characters in the character image is done by recognizing a font point size of the characters in a line in the character image, calculating the width of the line of characters based on the width of recognized font point size, measuring the actual width of the line of characters, comparing the calculated width to the actual width,

and correcting the recognized point size according to the ratio of the calculated width to the actual width (see paragraphs [0026]-[0034]).

Regarding claims 22-24, Ando, Miyaza, and Tanioka disclose the system discussed in claims 9, 14, and 15, and Miyaza further discloses wherein the selector further selects the font data based on a size of the region of the character image in the image data (see column 65 lines 53-58, column 66 lines 8-29).

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyaza and Tanioka as applied to claim 1 above, and further in view of Flowers Jr. et al.

Miyaza and Tanioka do not disclose expressly a communication section which communicates with an external apparatus, wherein said selector selects the compatible font data from among a plurality of font data stored in the external apparatus via the communication section.

Flowers discloses a communication section which communicates with an external apparatus, wherein said selector selects the compatible font data from among a plurality of font data stored in the external apparatus via the communication section (see Figs. 1 and 2, column 4 lines 9-13 and 22-36, column 5 lines 6-16, and column 12 lines 3-21).

Miyaza, Tanioka, & Flowers are combinable because they are from the same field of endeavor, matching character fonts for subsequent printing.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the external font server of Flowers with the system of Miyaza and Tanioka.

The suggestion/motivation for doing so would have been to eliminate the need for the client to devote storage space to character fonts and to increase processing time (see column 4 lines 22-27 and column 13 lines 5-8 of Flowers). Therefore, it would have been obvious to combine Flowers with Miyaza Tanioka to obtain the invention as specified in claim 4.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

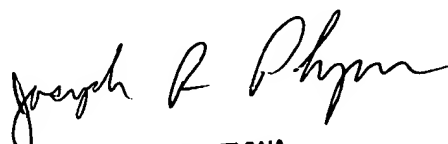
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark R. Milia whose telephone number is (571) 272-7408. The examiner can normally be reached M-F 8:00am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler M. Lamb can be reached at (571) 272-7406. The fax number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Mark R. Milia
Examiner
Art Unit 2625

MRM


JOSEPH R. POKRZYWA
PRIMARY EXAMINER